Installation and User Manual

GENEREX RCCMD AS400-Client

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I. Description

A. General Information

The RCCMD AS400 client is part of the UPSMAN UPS management system that allows the iSeries-AS400 to act as a client in an UPSMAN managed network. The UPSMAN management module will run on a number of other operating systems (http://www.generex.de/wwwfiles/dokus/1/supp_os/german/pdf/CDVersionen.pdf) or on most of the GENEREX standalone network UPS and facility management devices (www.generex.de).

Emergency and routine controlled system shutdowns are executed via the network when an authorized UPSMAN manager sends and RCCMD shutdown command to the AS400 running the RCCMD client. The customer defines the shutdown conditions and authorized UPSMAN managers during the setup of the UPS management system.

B. Modules

1. Configuration

Configuring the AS400 RCCMD client involves setting up a number of parameters which are stored in configuration files.

The following file contains the AS400 RCCMD client configuration.

a) Configuration file ‚communication 1' *rccmdcfg1*

This file should hold the ‚IP address of the AS400' which secures the identification of the AS400. This entry must match the entry posted in the IP address found in the configuration of the AS400 if this is not the case see section I.B.2.

This entry must also hold the definition of the port that will be used for this program. The default ports is 6003 and if this is not the case please refer to section I.B.2 Default value formation.

b) Configuration file ‚communication 2' *rccmdcfg2*

This file contains information in the form of IP addresses matching the RCCMD senders, that is to say UPSMAN managers or CS121 which manage your UPS. This defines which UPSMAN managers are allowed to send RCCMD messages to the RCCMD AS400 client. These entries act as a filter key for defining authorized UPSMAN managers and should this entry contain no IP addresses see section I.B.2. Default-value formation *all.

c) Configuration file ‚SHUTDOWN' *shutcmd*

This file contains a predefined shutdown sequence of commands that is enacted when the AS400 RCCMD client receives a valid RCCMD shutdown command. The initial default shutdown file that is written into the system is

empty. It is the duty of the administrator to define the operations that are to be executed in this file. This may or may not contain actions that are to precede a shutdown such as executing commands, sending messages and safely terminating other processes. (Important: Please see also subject 7!)

The following management program/on-line dialogues for viewing, input, changing and deleting from data records are available:

d) Administrative configuration file ‚Communication 1'

e) Administrative configuration file ‚Communication 2'

f) Administrative configuration file ‚SHUTDOWN'

C. Step-by-step installation instructions

1. **Save/copy the SAVF file from the data media (Email or CD ROM).** Following we describe this way using FTP.

PC FTP commands for use with the iSeries:

1. Login in to the iSeries as (QSECOFR!!!)
2. Make SAVF file in QGPL: CRTSAVF FILE(QGPL/RCCMD)
3. Backup the SAVF file from mail / CD in the root directory of the hard drive (we recommend to use root C:\ !!)
4. On the PC - START->EXECUTE and type in "CMD" and hit ENTER to open a commandshell.
5. Go into the directory containing SAVF (CD \)
6. Start FTP by the following command : "FTP <xxx.xxx.xxx.xxx - IP adress of your iSeries>
7. Then enter the following.

```
User (xxx.xxx.x.x:(none)): as400USER
        31 Enter password.
        Password: ********
        230 as400USER logged on.
        ftp> binary
        200 Representation type is binary IMAGE.
        ftp> quote site namefmt 1
        250  Now using naming format "1".
        ftp> put rccmd.savf /qsys.lib/qgpl.lib/rccmd.savf
        200 PORT subcommand request successful.
        150 Sending file to member RCCMD in file RCCMD in library QGPL.
        250 File transfer completed successfully.
        ftp: 1567104 bytes sent in 2.43Seconds 643.84Kbytes/sec.
        ftp> quit
        C:\exit
```

8. Please backup the files at your iSeries library: (At the CD ROM at Directory "OS400/RCCMD")

```
RSTLIB SAVLIB(RCCMD)
     DEV(*SAVF)
     SAVF(QGPL/RCCMD)
     OPTION(*ALL)
     MBROPT(*ALL)
     ALWOBJDIF(*ALL)
```

INSTALLATION WIZZARD: Please us for the further installation and configuration process the SETUP tool, coming with this software.

All following steps described in this documentation are handled through this tool.

Start the Setuptool as follows:

***call xxx/setupmnu**,*

where xxx is the name of the library in which you have saved RCCMD. We recommend to use the name "RCCMD".
You may go through all the installation parts step by step, or you may start the installation as complete installation routine. As completet routine use F10 to get to the next step.
Follow the instructions on the screen until you get the messge: 'Installation complete'. Finish.'

9. make sure that the programm SHUTDWN has the right to execute a shutdown call :

```
CHGOBJOWN OBJ(RCCMD/SHUTDWN)
      OBJTYPE(*PGM)
      NEWOWN(QSECOFR)
      CUROWNAUT(*REVOKE)
```

2. Enter JOB DESCRIPTION :

NOTE: If you have backuped the RCCMD system into any other library than RCCMD (not recommended), you have to change the jobdescription accordingly:

CHGJOBD XXX/RCCMD INLLIBL(XXX QGPL QTEMP QUSRSYS)
where "XXX" represents the name of the library where you have installed RCCMD.

3. Enter *CFGTCP* :
Selection 1 – please note your IP Adress.
Here has to be an entry (IP adress) - if this is not the case please check your Networkconfiguration with your Administrator .

```
                    Mit TCP/IP-Schnittstellen arbeiten
                                                System:   JCBOCS
Auswahl eingeben und Eingabetaste drücken.
  1=Hinzufügen   2=Ändern   4=Entfernen   5=Anzeigen   9=Starten   10=Beenden

Aus-  Internet-
wahl  Adresse         Teilnetzmaske    Leitungsbeschreibung  Leitungsart

      127.0.0.1       255.0.0.0          *LOOPBACK           *NONE
      192.168.2.2     255.255.255.0        JCBLIN            *ELAN



                                                                    Ende
F3=Verlassen   F5=Aktualisieren     F6=Liste drucken
F11=Schnittstellenstatus anzeigen   F12=Abbrechen   F17=Anfang   F18=Ende
```

Selection 10 – note the hostname which is linked to your IP adress.

Add your noted IP adress (if not already present) and choose a hostname.

```
                Mit TCP/IP-Host-Tabelleneinträgen arbeiten
                                                System:   JCBOCS
Auswahl eingeben und Eingabetaste drücken.
  1=Hinzufügen   2=Ändern   4=Entfernen   5=Anzeigen   7=Umbenennen

Aus-  Internet-
wahl  Adresse         Host-Name

      84.142.141.175    BODO.NET
      127.0.0.1         LOOPBACK
                        LOCALHOST
      192.168.2.2       JCBOCSSERVER
      195.186.18.142    MAIL.BLUEWIN.CH
      212.227.15.180    MAIL.BODO
                        AUTH.MAIL.ONLINEHOME.DE




                                                Ende
F3=Verlassen   F5=Aktualisieren   F6=Liste drucken   F12=Abbrechen
F17=Listenanfang bei
```

Selection 12 – enter/add (if not already present) – the hostname to the Domainname

```
                    TCP/IP-Domäne ändern (CHGTCPDMN)

Auswahl eingeben und Eingabetaste drücken.

Host-Name . . . . . .   'JCBOCSSERVER'

Domänenname . . . . . .   'JCBOCS.NET'



Domänensuchliste . . . . . .   *DFT

Suchpriorität für Host-Name . .   *LOCAL       *REMOTE, *LOCAL, *SAME
Domain Name Server:
  Internet-Adresse . . . . . .   *NONE
                                                Ende
F3=Verlassen   F4=Bedienerf.   F5=Aktualisieren   F10=Zusätzl. Parameter
F12=Abbrechen   F13=Verwendung der Anzeige   F24=Weitere Tasten
```

If there should be already an entry and your Domainname differs from your hostname, please do not change anything here.
4. Enter *ADDLIBLE XXX* - where XXX represents the name of the RCCMD library

5. Call the programm RCCMDCFG1 (*CALL RCCMDCFG1*)

Enter, if not already present, your IP adress here. Enter the port number 6003 (default). If you do not not want to use the default port, please change to any other available port and change also the CS121/UPSMAN sender accordingly.

Enter here you RCCMD Licensekeycode (see your AS 400 Licensedocument for **"RCCMD AS 400 Licensekey"**)).

Finish you setting by pressing F2 and save your settings. Leave the Program with F3.)For deleting your entries use F23.)

```
JCBOCS              Kommunikationsdatei Verwalten              27.11.05
 RCCMDCFG1                                                     00:05:51
------------------------------------------------------------------------------




 Eigene IP Addresse:  192.168.2.2
 Lokale Portnummer :  6.003
 Sicherheitscode   :  77METRO-PARIS011461









------------------------------------------------------------------------------
  F2=Akzeptiern  F3=Verlassen  F23=Löschen
```

ATTENTION: If there is no Adress here, so you may add this adress as follows:

1. Enter at CommandLine AS400: UPDDTA RCCMD/RCCMDCFG1
2. Enter your IP
3. Return
4. F3 and Return

6. (Alternatively 7.) Call the program RCCMDCFG2 (*CALL RCCMDCFG2*).

Enter here one or more remote IP adresses of your RCCMD server (CS121 or UPSMAN). Every Adress which you enter here has the permisson to transmit an RCCMD shutdown signal, other adresses, not listed here will be refused to send shutdown signals. Please check youre Firewall so that those RCCMD senders can use the Port 6003 to transmit their signal.

NOTE: If you do not enter any IP adress here, all RCCMD senders in your network are allowed to send an RCCMD shutdown signal ! We recommend to use this feature only while testing, at normal operation we recommend to restrict the number of RCCMD senders.

```
JCBOCS              Kommunikationsdatei Verwalten              27.11.05
 RCCMDCFG2                                                     00:09:13
--------------------------------------------------------------------------------



  Ferner IP . . . : 12.21.12.22




--------------------------------------------------------------------------------
  F2=Akzeptiern  F3=Verlassen  F7=Vorwärts  F8=rückwärts  F23=Löschen
```

After this please press F2 to save your settings. Leave the program with F3. (Using F23 you can delete youre entries, F7/F8 is to scroll through the page.)

7*) .* (Alternatively 6.) Call the program SHUTCMD *(CALL SHUTCMD parm' ')*

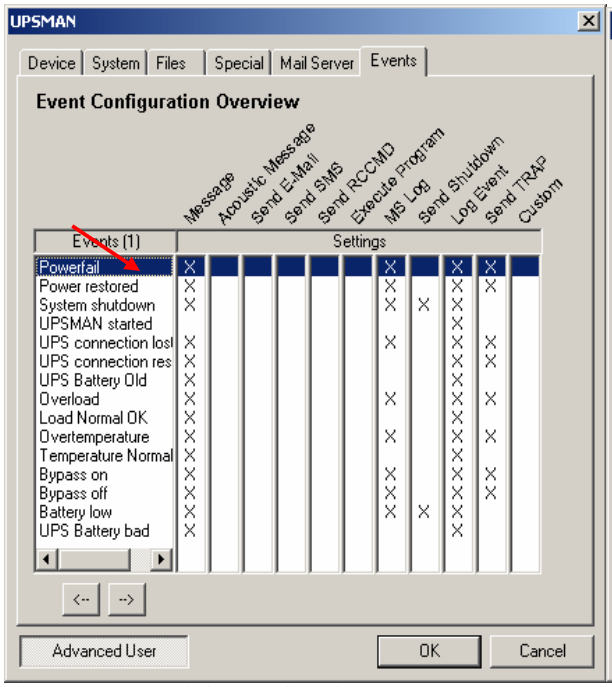
Enter the commands you want to execute when an RCCMD Signal arrives. (your shutdown script) . The syntax and commands should be tested before manually so that a simple call of this SHUTCMD has the desired reaction - shutting down your ISeries.

The command ***CALL SHUTCMD parm*** ' ' opens a new screen where you can configure the AS 400 Shutdown Sequence (see page 11, „Example to test RCCMD transmission without PWRDWNSYS"). The command CALL SHUTCMD parm ´ ´ can be used without any risk, it does NOT execute any shutdown, it just opens a new configuration screen.

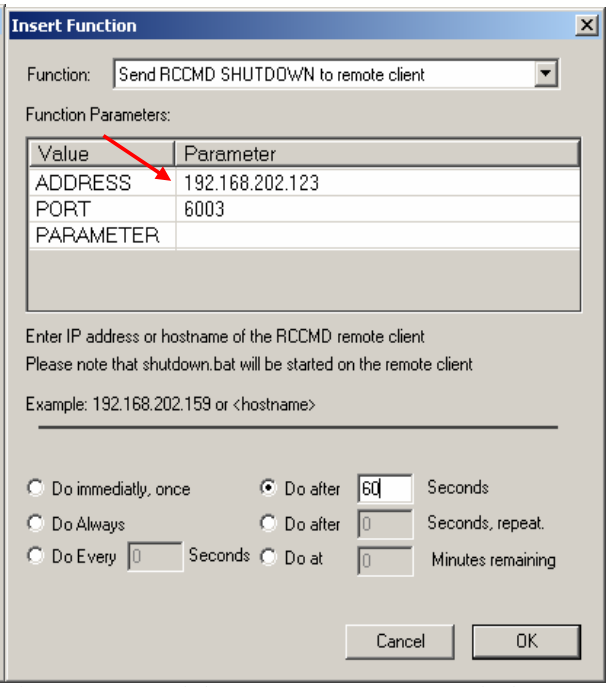
Note: If you do not enter anything here, the RCCMD will use per default the command ***PWRDWNSYS*** (Power Down System) of your system. If this is the case, please check if the option **cntrld* or **immed* is active.

If you want to use any other additional call before the shutdown, please enter as last command *PWRDWNSYS *immed* - otherwise your System will not do any shutdown ! Plesae note that without the *immed parameter the shutdown may take quite long.

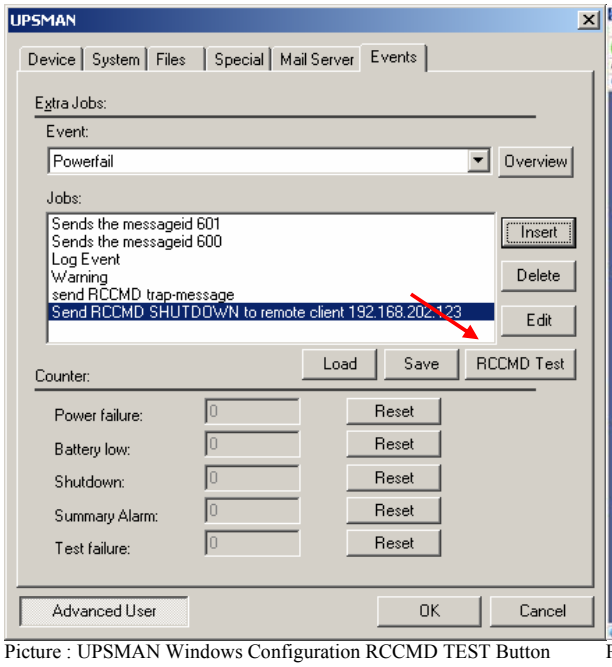
Tip: You can test your installation without risking a shutdown if you enter here any other comman - without the pwrdwnsys. So the moment you enter any command here which is not pwrdwnsys, you can use this for testing the transmission.
Youre CS121 or UPSMAN have in the EVENTS configuration menue "testbutton" to transmit an RCCMD shutdownsignal without making the UPS switch to battery.



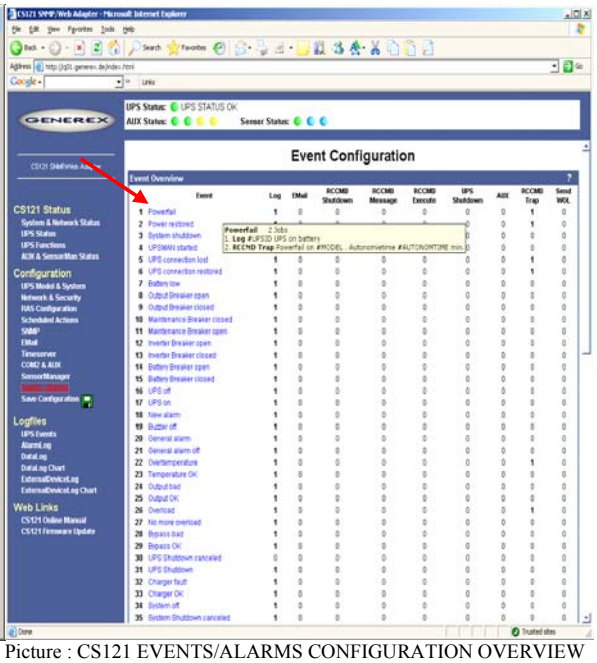
Picture : UPSMAN Windows Configuration EVENT OVERVIEW



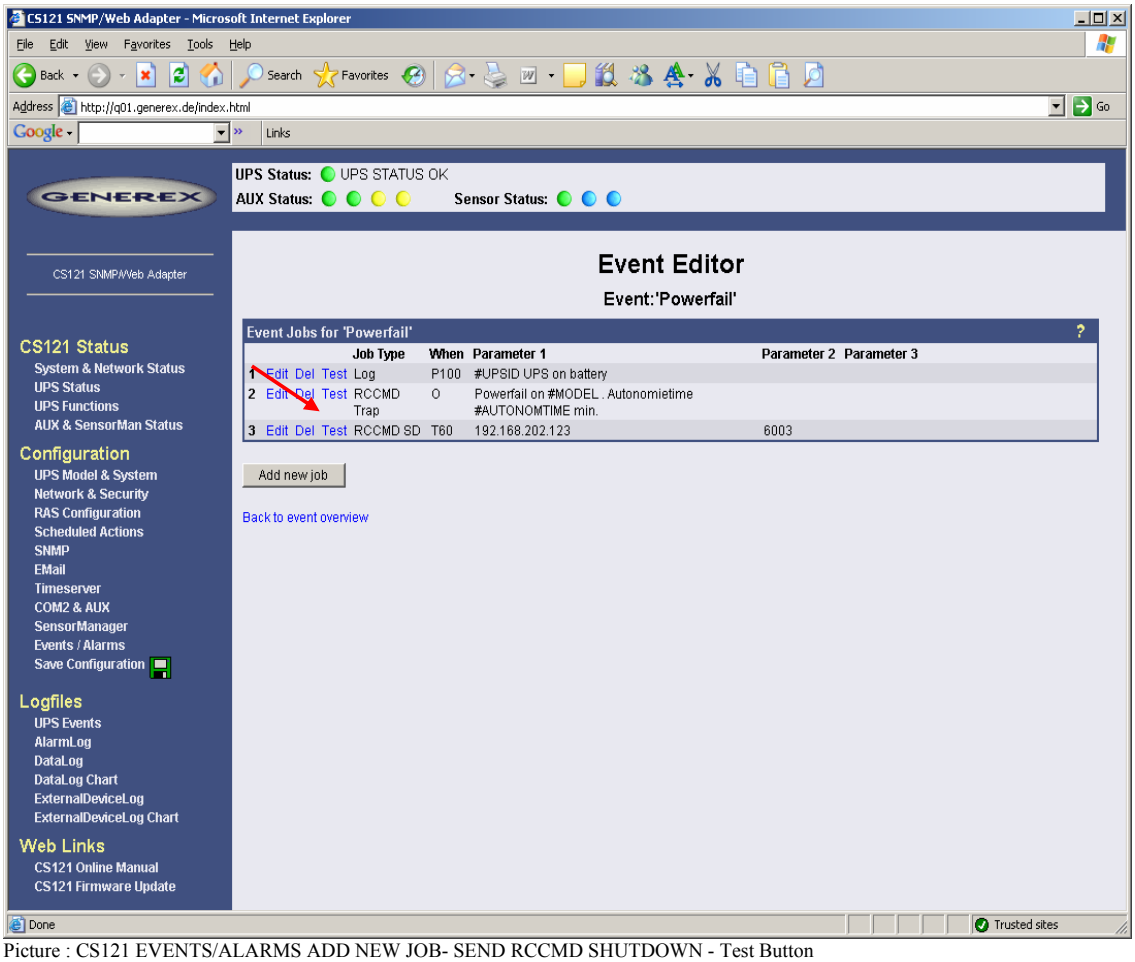
Picture: UPSMAN Windows INSERT EVENT RCCMD Shutdown



Picture : UPSMAN Windows Configuration RCCMD TEST Button



Picture : CS121 EVENTS/ALARMS CONFIGURATION OVERVIEW



Picture : CS121 EVENTS/ALARMS ADD NEW JOB- SEND RCCMD SHUTDOWN - Test Button

If this test is successfull, you can be sure that also a real Shutdown call will also work.

In the field "sequence" enter the number of the priority of your commands, eg. 1 for the first command, 2 for the seconds, etc.

After you have finished your settings enter F2. Now leave the program with F3.

Example to test RCCMD transmission without PWRDWNSYS:

Use the following testsequence to check your installation without a real OS 400 shutdown. The test consist of 3 entries: All actions will result in a textmessage to QSECOFR aund QSYSOPR. So to check the successfull transmissions of RCCMD signals, read the logfileentries in the system operator message queue (display message queue SYSOPR). After a successfull test continue with subject 8 (start of RCCMDAS400-Client).

Eample ShutDown:

```
JCBOCS              Shutdownbefehlsverwaltung                  27.11.05
 SHUTCMD                                                       00:12:02
---------------------------------------------------------------------------
```

```
 Sequence        1
 Befehl      SNDMSG MSG('FOLLOWING MESSAGES ARE  TESTMESSAGES FROM
RCCMDAS400-CLIENT') TOUSR(QSYSOPR)




--------------------------------------------------------------------------------
 F2=Akzeptiern  F3=Verlassen  F7=Vorwärts  F8=Rückwärts  F23=Löschen
```

Press F7, now a new Menue opens:

```
JCBOCS              Shutdownbefehlsverwaltung              27.11.05
 SHUTCMD                                                   00:12:02
--------------------------------------------------------------------------------


 Sequence        2
 Befehl       CALL SETUPTEST1




--------------------------------------------------------------------------------
 F2=Akzeptiern  F3=Verlassen  F7=Vorwärts  F8=Rückwärts  F23=Löschen
```

etc. ...

You may also remove the existing entries or add extra entries to this sequence. Please take care that the sequence numbers do not overwrite existing entries.

You are still logged in as QSECORF :

Enter : CHGMSGQ *USRPRF *break, after this enter : call shutcmd

1st Command to enter:

Sequence: 1
Befehl: SNDMSG 'TestShutDownBefehl received' QSECOFR
Accept this by F2 and page forward using F7 for te next entry.
Return

2nd Comand to enter:

Sequence: 2
Befehl: SNDMSG 'TEST-RCCMD has been sended' QSYSOPR
Accept this by F2 and page forward using F7 for te next entry - or use F8 to return to your previous menue - or use F23 to delete your entries.

More entries: Like before, use F3 to leave the program.

Here an example with PWRDWNSYS - ideal for testing if you are not allowed to do a real shutdown test of your AS 400.:

call shutcmd

1st Command to enter:

Sequence: 1
Befehl: *SNDMSG 'ShutDownCommand received : System shuts down in 10 Minutesr' QSECOFR*
Accept this command by F2, page down using F7 for the next command:

2nd Command to enter:

Sequence: 2
Befehl: *SNDMSG 'RCCMD has been sended, Batterie close to low level' QSYSOPR*
Accept this command by F2, page down using F7 for another command or go back with F8. To delete your previous entries use F23.

3rd Command to enter:

Sequence: 99
Befehl: *PWRDWNSYS *IMMED*
command by F2, or leave the program with F3

In the menue Sequence you define by the sequence number the priority of the commandprocessing. The smallest number has the highest priority and will be executed first. Eg. if you have the sequences 3, 5,1,7,2, than RCCMD will execute your commands in the sequence 1,2,3,5,7.

The above shown examples may differ from your system. Please check if the programmed actions are complete to shutdown your AS 400 system, otherwise add extra commands to this sequence. If you have questions please call our hotline service for AS 400 or send us an email with your questions.

Tip: *Use one or more CL-Programs for your individual sequence control*

8. Start of the AS/400-RCCMD-Client

1. Manual start of the AS/400-RCCMD-Client

The Lib RCCMD has to be in the liblist when you start the job. (enter *dsplibl).* If not present, enter : *addlible RCCMD*

Enter :

```
SBMJOB CMD(CALL PGM(STARTRCCMD) PARM('RCCMD')) JOB(RCCMD)
JOBD(RCCMD/SOCKSERV) USER(*JOBD) SYSLIBL(*SYSVAL) CURLIB(*CRTDFT) INLLIBL(*JOBD)
```

And check this by enter:

WRKACTJOB JOB(RCCMD)
The should be listed now, if not than there might be an error in your installation.

```
                    Work with active jobs    JCBOCS
                                                28.11.05  00:24:36
CPU %:    0,0     Abgelaufene Zeit:   00:00:00     Aktive Jobs:   163

Auswahl eingeben und Eingabetaste drücken.
  2=Ändern   3=Anhalten   4=Beenden   5=Arbeiten mit     6=Freigeben
  7=Nachricht anzeigen    8=Mit Spool-Dateien arbeiten   13=Unterbrechen

Ausw.  Subsystem/Job  Benutzer        Art     CPU %  Funktion              Status
       RCCMD          BCRADTKE    BCH    0,0       PGM-SOCKSERV     TIMW




                                                Ende
Parameter oder Befehl
===>
F3=Verlassen    F5=Aktualisieren      F10=Neubeginn   F11=Aufgelaufene Daten
F12=Abbrechen   F23=Weitere Angaben   F24=Weitere Tasten
```

Note. The library RCCMD is the name of the saved library in your As 400. At a restore into any other library, please use this new name accordingly.

2. Automatic programstart at IPL

Enter the following command:

```
ADDAJE SBSD(QUSRWRK) JOB(RCCMD) JOBD(RCCMD/SOCKSERV)
```
** This commands makes RCCMD to start automatically at every System reboot **

At the next Systemstart : please check the autostart entry by entering:
WRKACTJOB JOB(RCCMD), the job should be listet now, if not than the installation is incorrect.

The rccmd-comand is always inside the saved library RCCMD. By entering the librarylist in the jobdescription (see subject 2) you do not need any entry in other jobs or menues. (not needed in systemvalue QUSRLIBL, no need to change manually by "addlibl" or "chglibl"). This is only needed during the installation and the manual start of RCCMD, not at the automatic start)

You may also use a differen way to autostart RCCMD:

Autostart via subsystem in QSTRUP (SystemstartProgramm from IBM): You may also use the IBM scheduler to start RCCMD. Check if the Objekt library is present in the Liblist. A helpfunction is available for the parameter USER in the command smbjob and/or chgjobd.

** This product is compatible with OS/400-Releases V4R5M0 through V5R3M0 **